

midPoint Demo Upgrade HOWTO

midPoint demo migration guide

Together with midPoint upgrade also new version of live demo was made. This guide describes midPoint migration from 2.2.1 to 3.0 version in following **steps**:

1. **Download and install Virtual box** via <https://www.virtualbox.org/wiki/Downloads> and select appropriate platform package.
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2. **Download ubuntu server** via <http://virtualboxes.org/images/ubuntu-server/> and select <https://s3-eu-west-1.amazonaws.com/virtualboxes.org/ubuntu-14.04-server-i386.ova.torrent>
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3. **Download and install utorrent** via <http://www.utorrent.com/downloads/win> (select stable version). Add and start to download ubuntu-14.04-server-i386.ova.torrent
Download midpoint 2.2.1 VM (demo-2.2.1-new-ip-ovf1.ova). New user has to be added with new password via command: `sudo adduser ...`
`sudo.`
Also edit of interfaces is needed via command: `sudo vim /etc/network/interfaces` where static is replaced with dhcp and parts bellow are commented.
Restart is needed via command: `sudo service networking restart` or `sudo /etc/init.d/networking restart`
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4. **Import new VM** (ubuntu-14.04-server-i386.ova) into Virtual box where midpoint 3.0 is to be installed. Set up settings, especially motherboard base memory with 2048 MB.
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5. **Download and install putty.exe** via <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>
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6. **Set up Port forwarding** in midpoint demo VM in Virtual box (Settings -> Network -> Advanced) in order to run midpoint, putty and web applications:

Name	Protocol	Host IP	Host Port	Guest IP	Guest Port
Rule1 (midpoint)	TCP	127.0.0.1	8080	10.0.2.15	8080
Rule2 (web apps)	TCP		5678		80
Rule3 (putty)	TCP		2222		22

You can check out your Host IP and Guest IP in ubuntu via command: `ifconfig`

In case you are working in windows (where virtual box is installed) possibility to create new port (for example for putty) is via command: `C:\Program Files\Oracle\Virtual Box>VBoxManage modifyvm "ubuntu-14.04-server-i386" --natpf1 "Rule3,tcp,,2222,,22"`
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7. **Install JDK** via command:
`sudo add-apt-repository ppa:webupd8team/java`
`sudo apt-get update`
`sudo apt-get install oracle-java6-installer`
`sudo apt-get install oracle-java7-installer`
`sudo apt-get install oracle-java8-installer`
`sudo apt-get update`
=====
8. **Tomcat installation and configuration** on VM (check also: <https://wiki.evolveum.com/display/midPoint/midPoint+on+Ubuntu%2C+Tomcat%2C+PostgreSQL+HOWTO> and <https://www.digitalocean.com/community/tutorials/how-to-install-apache-tomcat-7-on-ubuntu-14-04-via-apt-get>) via commands:
`sudo apt-get install tomcat7`
`sudo apt-get install tomcat7-docs tomcat7-admin tomcat7-examples`
`sudo apt-get install ant git`
`sudo vim /etc/tomcat7/tomcat-users.xml`
`<tomcat-users>`
`<user username="administrator" password="5ecr3t" roles="manager-gui,admin-gui"/>`
`</tomcat-users>`
`sudo service tomcat7 restart`

Also file `setenv.sh` with content (`CATALINA_OUT=/var/log/tomcat7/catalina.out`) has to be created via command: `sudo vim /usr/share/tomcat7/bin/setenv.sh`

At last check in browser connection via: <http://localhost:8080>

It works! should appear. Once installed, you can access the manager webapp and the host-manager webapp entering username administrator and password 5ecr3t.

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9. **PostgreSQL installation.** Check <https://wiki.evolveum.com/display/midPoint/midPoint+on+Ubuntu%2C+Tomcat%2C+PostgreSQL+HOWTO>

To install PostgreSQL, run the following command:

```
sudo apt-get install postgresql
```

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10. **LDAP installation.** Check also <https://help.ubuntu.com/14.04/serverguide/serverguide.pdf>

To install LDAP, run the following command:

```
sudo apt-get install slapd ldap-utils
sudo ufw app list
sudo ufw allow "openLDAP LDAP"
```

This is command what the slapd-config DIT looks like via the LDAP protocol:

```
ldapsearch -Q -LLL -Y EXTERNAL -H ldap:/// -b cn=config dn
```

This is command what the dc=example,dc=com DIT looks like:

```
ldapsearch -x -LLL -H ldap:/// -b dc=example,dc=com dn
```

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11. **Midpoint 3.0 installation.** Check also: <https://wiki.evolveum.com/display/midPoint/midPoint+on+Ubuntu%2C+Tomcat%2C+PostgreSQL+HOWTO>

Download midpoint last recent version via command:

```
sudo wget "athena.evolveum.com/builds/master/build2781-v3.0.1-devel-15-g0c62837/midpoint-3.1-SNAPSHOT-dist.tar.gz"
```

Unpack the file via command:

```
sudo tar -zxvf */midpoint-3.1-SNAPSHOT-dist.tar.gz
```

Create midPoint home directory and also make sure it can be accessed by tomcat:

```
sudo mkdir /opt/midpoint-home
sudo chown tomcat7:tomcat7 /opt/midpoint-home
```

Add JAVA_OPTS="\$JAVA_OPTS -server -Xms256m -Xmx1024m -XX:PermSize=128m -XX:MaxPermSize=256m -Dmidpoint.home=/opt/midpoint-home/" into catalina.sh file via command:

```
sudo vim /usr/share/tomcat7/bin/catalina.sh
```

Copy midpoint.war in tomcat7 via command:

```
sudo cp */midpoint-3.1-SNAPSHOT/war/midpoint.war /var/lib/tomcat7/webapps
```

NOTE:

For stable release check:

- the latest midpoint <http://www.evolveum.com/downloads/midpoint/3.0/>
- and download midpoint-3.0-dist.zip

For snapshot check:

- the latest commit number on <https://bamboo.evolveum.com/browse/MID-TRUNK/latestSuccessful>
- and download it via <http://athena.evolveum.com/builds/master/> where .zip file should be selected (midpoint-3.1-SNAPSHOT-dist.zip).

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12. **Apache install.** Check also: <https://wiki.evolveum.com/display/midPoint/midPoint+on+Ubuntu%2C+Tomcat%2C+PostgreSQL+HOWTO>

Install apache2 via command:

```
sudo apt-get install apache2
```

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13. **Install WinSCP** (commander variant) on local operation system because of need to transfer files between local operation system and midpoint VM located on Virtual box.
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14. **Midpoint 3.0 configuration.**

In case you want to import new midpoint WAR, delete midpoint files (sudo rm -r midpoint) in /var/lib/tomcat7/webapps and /var/lib/tomcat7/Catalina/localhost.

In order to change midpoint repository, edit config.xml in opt/midpoint-home and replace old H2 repository with postgresQL:

```
<repository>
  <repositoryServiceFactoryClass>com.evolveum.midpoint.repo.sql.SqlRepositoryFactory</repositoryServiceFactoryClass>
  <embedded>false</embedded>
  <driverClassName>org.postgresql.Driver</driverClassName>
  <jdbcUsername>midpoint</jdbcUsername>
  <jdbcPassword>5ecr3t</jdbcPassword>
  <jdbcUrl>jdbc:postgresql://localhost/midpoint</jdbcUrl>
  <hibernateDialect>com.evolveum.midpoint.repo.sql.util.MidPointPostgreSQLDialect</hibernateDialect>
</repository>
```

```
<hibernateHbm2ddl>validate</hibernateHbm2ddl>
</repository>
```

15. **Create postgresQL database.** Check: <https://wiki.evolveum.com/display/midPoint/midPoint+on+Ubuntu%2C+Tomcat%2C+PostgreSQL+HOWTO>

Example for create a database: `ubuntu@ubuntu-i386:/$ sudo -u postgres createdb --owner=midpoint midpoint`

Example to execute the script to create database: `ubuntu@ubuntu-i386:/$ psql --host=localhost --username=midpoint -d midpoint < /midpoint-2.3-SNAPSHOT/config/sql/midpoint/2.3/postgresql/postgresql-2.3.sql`

Check if database was created correctly:

```
ubuntu@ubuntu-i386:/$ sudo su - postgres
```

```
postgres@ubuntu-i386:~$ psql -U postgres
```

```
postgres=# \l
```

16. **Download, unzip and copy Java Cryptography Extension (JCE)** version 6, 7, 8 `local_policy.jar` and `US_export_policy.jar` files into `/usr/lib/jvm/java.../jre/lib/security` file located in midpoint VM.

17. **Download and install KeyStore Explorer 5.0** in order to **combine default and strong key** from midpoint's 2.2.1 `keystore.jceks` (located in `/opt/midpoint`) with midpoint's 3.0 `keystore.jceks` default key (located in `/opt/midpoint-home`).

18. **Create export.csv file or import** via WinSCP and set up full access rights (`sudo chmod 777 export.csv`) and also `chmod o+w` for `hr` in path `/var/opt/hr/export.csv`
Also set `sudo chown tomcat7:tomcat7 /var/opt/hr`

19. **Download OpenDj** zip (`OpenDJ-2.5.0-Xpress1.zip`) file, unzip.
Create new directory via command: `sudo mkdir /opt/OpenDJ`
Copy `OpenDJ-2.5.0-Xpress1` into `/opt/OpenDJ` and set access rights if necessary (`sudo chmod 777 ...`).

Start installation (<https://wiki.evolveum.com/display/midPoint/OpenDJ+Installation+and+Configuration>) of OpenDJ via command (taking into account your path and OpenDJ version):

```
ubuntu@ubuntu-i386:/$ sudo /opt/opendj/OpenDj.*./setup --cli
```

Import `exportPhpLdapAdminDemo3.ldif` or `.ldif` by your desire (Option 3 for populating the database). Exact path is demanded.

Allow ACL for `cn=changelog` suffix (non-Windows platforms only):

```
opt/OpenDJ/OpenDJ-2.5.0-Xpress1/bin/$ ./dsconfig -h localhost -p 4444 -D "cn=Directory Manager" -w secret -X -n set-access-control-handler-prop --add global-aci:"(target=\"ldap:///cn=changelog\" )(targetattr=\"*\" |\" ) (version 3.0; acl \"IDM Access to ChangeLog\"; allow (read,search,compare) userdn=\"ldap://uid=idm,ou=Administrators,dc=example,dc=com\");" -n
```

Allow ACL for root DSE (non-Windows platforms only):

```
opt/OpenDJ/OpenDJ-2.5.0-Xpress1/bin/$ ./dsconfig -h localhost -p 4444 -D "cn=Directory Manager" -w secret -X -n set-access-control-handler-prop --add global-aci:"(target=\"ldap://\") (targetattr=\"changeLog || firstChangeNumber || lastChangeNumber\" )(version 3.0; acl \"IDM Access to ChangeLog\"; allow (read,search,compare) userdn=\"ldap://uid=idm,ou=Administrators,dc=example,dc=com\");" -n
```

20. In order to run Addressbook resource **create database addressbook** with table people.

You can also import file `addressbook.sql` from VM `Demo2.2.1` (`postgres@electra:~$ pg_dump addressbook > /tmp/addressbook.sql`) into postgres database (via WinSCP) VM `Demo3`.

Following command for table people creation is also possible to use:

```
addressbook=# create table people (first_name CHARACTER VARYING(100),last_name CHARACTER VARYING(100) NOT NULL, tel_number CHARACTER VARYING(32),fax_number CHARACTER VARYING(32),office_id CHARACTER VARYING(32),floor integer, street_address CHARACTER VARYING(100),city CHARACTER VARYING(100),country CHARACTER VARYING(100),postal_code CHARACTER VARYING(16),validity boolean, created timestamp without time zone,modified timestamp without time zone,username CHARACTER VARYING(64),password CHARACTER VARYING(64));
```

21. **Insert values in table people.** Command is following (or import file `addressbook-schema.sql`):

```
addressbook=# insert into people (first_name,last_name,tel_number,office_id,city,validity,username,password) values ('Raffaello','Sanzio da Urbino',+3968887777,'Employee','Rome','t','raphael','dS0eE');
```

```
addressbook=# insert into people (first_name,last_name,tel_number,office_id,city,validity,username,password) values ('Leonardo','da Vinci',+3968687797,'Employee','Florentine','t','leonardo','NZ6i1');
```

```
addressbook=# insert into people (first_name,last_name,tel_number,office_id,city,validity,username,password) values ('Michelangelo','di Lodovico Buonarroti Simoni',+3968587707,'Contractor','Rome','t','michelangelo','l3xps');
```

22. **Set up user addressbook** in postgres database (based on Addressbook postgres resource XML schema user addressbook). Command is following:
- ```
addressbook=# create user addressbook with password 'secret';

addressbook=# grant all privileges on database addressbook to addressbook;

addressbook=# grant all on table people to addressbook;
```
- =====
23. **Import file hr.sql** from VM Demo2.2.1 (postgres@electra:~\$ pg\_dump hr > /tmp/hr.sql) into postgres database (via WinSCP) VM Demo3 and set up user hr in postgres database:
- ```
sudo -u postgres createuser --pwprompt --no-superuser --no-createdb --no-createrole hr

Create database:

sudo -u postgres createdb --owner=hr hr

psql --host=localhost --username=hr < /home/ubuntu/hr.sql
```
- =====
24. **Import addressbook.war and hr.war** into ./tomcat7/webapps
- =====
25. **Set up replication for opendj** based on <http://ludopoitou.wordpress.com/2011/05/11/opendj-enabling-the-external-change-log-on-a-single-server/>
- Code can be following:
- ```
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1$ bin/dsconfig create-replication-server -h 10.0.2.15 -p 4444 -D "cn=directory manager" -w secret -X -n
--provider-name "Multimaster Synchronization" --set replication-port:8989 --set replication-server-id:2 --type generic
```
- And:
- ```
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1$ bin/dsconfig create-replication-domain -h 10.0.2.15 -p 4444 -D "cn=directory manager" -w secret -X -n
--provider-name "Multimaster Synchronization" --set base-dn:dc=example,dc=com --set replication-server:10.0.2.15:8989 --set server-id:3 --
type generic --domain-name example_com
```
- And:
- ```
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1$ bin/ldapsearch -D cn=directory\ manager -w secret -h 10.0.2.15 -p 1389
-J "1.3.6.1.4.1.26027.1.5.4:false:;" -b "cn=changelog" "(objectclass=*)"
```
- =====
26. **Add further .ldif files** via, check also <http://opendj.forgerock.org/opendj-server/doc/admin-guide/index/chap-groups.html>:
- ```
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$ ./ldapmodify --port 1389 --bindDN "cn=Directory Manager" --bindPassword secret --defaultAdd --filename /home/ubuntu/groupsPainters-permissions.ldif
```
- Set up access rights to openDJ for technical midpoint user, check also <http://opendj.forgerock.org/opendj-server/doc/admin-guide/index/chap-privileges-acis.html>:
- ```
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$./dsconfig -h localhost -p 4444 -D "cn=Directory Manager" -w secret -X -n set-access-control-handler-prop --add global-aci:!(target="ldap:///ou=groups,dc=example,dc=com")(version 3.0; aci "Admin config access"; allow (all) groupdn="ldap:///cn=Administrators,ou=groups,dc=example,dc=com");' -n
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$./dsconfig -h localhost -p 4444 -D "cn=Directory Manager" -w secret -X -n set-access-control-handler-prop --add global-aci:!(target="ldap:///ou=groups,dc=example,dc=com")(version 3.0;aci "Administrators Group permission"; allow(all) groupdn="ldap:///cn=Administrators,dc=example,dc=com");' -n
```
- In case of any delete, modification or add operation you can also use following commands to change previous settings:
- ```
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$ ./ldapdelete --port 1389 --bindDN "cn=Directory Manager" --bindPassword secret "cn=painters,ou=Groups,dc=example,dc=com"
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$ ./ldapdelete --port 1389 --bindDN "cn=Directory Manager" --bindPassword secret "cn=employees,ou=Groups,dc=example,dc=com"
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$ ./ldapdelete --port 1389 --bindDN "cn=Directory Manager" --bindPassword secret --deleteSubtree "dc=example,dc=com"
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$ ./ldapmodify --port 1389 --bindDN "cn=Directory Manager" --bindPassword secret --defaultAdd --filename /home/ubuntu/groupsPainters-permissions.ldif
```
- =====
27. In case you **need to check LDAP schema or search** some element use command:
- Check all:
- ```
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$ ldapsearch -x -h localhost -p 1389 -b "dc=example,dc=com" -s sub "objectclass=*"

Check selected element:
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$ ldapsearch -x -h localhost -p 1389 -b "dc=example,dc=com" "cn=Testi Testini"
```
- In case you need to import ldif file with **pre-encoded attributes** (such as userpassword: {SSHA} KHleTa1f4ntz0w6evBan7w+wxFYEQ7AFH8Gz7w==) you need to change default LDAP settings via:
- ```
ubuntu@ubuntu-i386:/opt/opendj/OpenDJ-2.5.0-Xpress1/bin$ ./dsconfig set-password-policy-prop --set allow-pre-encoded-passwords:true --
```

```
policy-name "Default Password Policy" -h localhost -p 4444 -D "cn=Directory Manager" -w secret -X -n
```

```
=====
```

28. **Phpldapadmin installation and Apache2 configuration:**

```
sudo mkdir /etc/apache2/conf.d  
sudo apt-get install phpldapadmin
```

Because phpldapadmin expects old file structure is necessary to do:
sudo mv /etc/apache2/conf.d/* /etc/apache2/conf-enabled/
ubuntu@ubuntu-i386:/etc/apache2/conf-enabled\$ sudo mv phpldapadmin phpldapadmin.conf
sudo service apache2 reload

```
=====
```

29. **Phpldapadmin configuration.** Check also: <http://forums.debian.net/viewtopic.php?f=5&t=111508>

At sudo vim /usr/share/phpldapadmin/lib/functions.php lines 2130, 2311, 2320 and sudo vim /usr/share/phpldapadmin/lib/PageRender.php line 289:

```
replace: password_hash  
with:    pla_password_hash
```

At sudo vim /usr/share/phpldapadmin/lib/functions.php line 2549 and sudo vim /usr/share/phpldapadmin/lib/ds_ldap.php line 1120:

```
replace: preg_replace('/\\\[0-9A-Fa-f]{2}/e',''.chr(hexdec("\\1')).''',$rdn);  
with:    preg_replace_callback('/\\\[0-9A-Fa-f]{2}/',function(){return '''.chr(hexdec("\\1')).'';},$rdn);
```

At /usr/share/phpldapadmin/lib/functions.php line 2554 and /usr/share/phpldapadmin/lib/ds_ldap.php line 1125:

```
replace: preg_replace('/\\\[0-9A-Fa-f]{2}/e',''.chr(hexdec("\\1')).''',$dn);  
with:    preg_replace_callback('/\\\[0-9A-Fa-f]{2}/',function(){return '''.chr(hexdec("\\1')).'';},$dn);
```

```
=====
```

30. **Phpldapadmin configuration.** Check also: <http://forums.debian.net/viewtopic.php?f=5&t=111508>

At sudo vim /etc/phpldapadmin/config.php and /usr/share/phpldapadmin/config/config.php line 161

```
replace: //$config->custom->appearance['hide_template_warning'] = false;  
with:    $config->custom->appearance['hide_template_warning'] = true;
```

At line 194 - 199

```
replace: $config->custom->appearance['friendly_attrs'] = array(  
    'facsimileTelephoneNumber' => 'Fax',  
    'gid'                      => 'Group',  
    'mail'                     => 'Email',  
    'telephoneNumber'         => 'Telephone',  
    'uid'                      => 'User Name',  
    'userPassword'            => 'Password'  
);
```

```
with:    $config->custom->appearance['friendly_attrs'] = array(  
    # 'facsimileTelephoneNumber' => 'Fax',  
    # 'gid'                      => 'Group',  
    # 'mail'                     => 'Email',  
    # 'telephoneNumber'         => 'Telephone',  
    # 'uid'                      => 'User Name',  
    # 'userPassword'            => 'Password'
```

);

At line 286

replace: \$servers->setValue('server','name','My LDAP server');
with: \$servers->setValue('server','name','Leonardo's Workshop LDAP Server');

At line 296

replace: //\$servers->setValue('server','port',389);
with: \$servers->setValue('server','port',1389);

At line 318

replace: \$servers->setValue('login','auth_type','session');
with: \$servers->setValue('login','auth_type','config');

At line 326

replace: \$servers->setValue('login','bind_id','cn=admin,dc=example,dc=com');
with: \$servers->setValue('login','bind_id','uid=phpldapadmin,ou=Administrators,dc=example,dc=com');

At line 332

replace: //\$servers->setValue('login','bind_pass','secret');
with: \$servers->setValue('login','bind_pass','secret');

sudo service apache2 reload

=====

31. **Apache2 configuration.**

Import default file from VM demo midpoint2 /etc/apache2/sites-available into VM demo midpoint3 and rename it to 000-default.conf

Rename files 000-default.conf to 000-default.conf.orig in VM demo midpoint3 located in /etc/apache2/sites-enabled and /etc/apache2/sites-available

Copy 000-default.conf file into /etc/apache2/sites-enabled and /etc/apache2/sites-available
sudo service apache2 reload

Modules need to be started via:

ubuntu@ubuntu-i386:/\$ a2enmod rewrite
sudo service apache2 reload
ubuntu@ubuntu-i386:/\$ a2enmod proxy_http
sudo service apache2 reload
ubuntu@ubuntu-i386:/\$ a2enmod authnz_ldap
sudo service apache2 reload

NOTE: exportPhpLdapAdminDemo3.Idif file configuration passwords and passwords in 000-default.conf file has to be identical

Check /var/log/apache2/error.log or /var/log/apache2/access.log in case of trouble.

Also direction has to be created for library application: sudo mkdir /var/www/library
sudo chown tomcat7:tomcat7 /var/www/library
sudo service tomcat7 restart

=====

32. According settings in /var/lib/tomcat7/webapps/hr/WEB-INF/db-config.xml and in 000-default.conf **add password to user hr:**

hr=# ALTER ROLE hr WITH PASSWORD 'nbusr123';

=====

33. **Set up OpenDJ automatic initialization.**

Add user:

```
ubuntu@ubuntu-i386:/opt/openssl/OpenDJ-2.5.0-Xpress1/bin$ sudo adduser opendj
```

Check user in: /etc/passwd (`opendj:x:1001:1001:OpenDJ,,,:/home/opendj:/bin/bash`)

Change owner:

```
ubuntu@ubuntu-i386:/opt/openssl$ sudo chown -R opendj:opendj OpenDJ-2.5.0-Xpress1
```

Create initialization script:

```
ubuntu@ubuntu-i386:/opt/openssl/OpenDJ-2.5.0-Xpress1/bin$ sudo ./create-rc-script -f etc/init.d/opendj -u opendj
```

```
ubuntu@ubuntu-i386:/etc/init.d$ sudo update-rc.d opendj defaults
```

Check initialization:

```
ubuntu@ubuntu-i386:~$ ps -ax | grep opendj
```

=====

34. **Import midpoint resources:**

Import extension-electra.xsd into /opt/midpoint-home/schema

Via midpoint opened in browser import (Configuration -> Import objects -> Choose file -> Import object):

addressbook.xml, hr.xml, opendj.xml, org.xml, password-policy.xml, role-contractor.xml, role-fte.xml, role-patron.xml and user-template.xml

In midpoint confirm user template via (Configuration -> Basic -> Click on blue square beside Default user template -> select Default user template -> Save)

=====

35. **In case of troubles with phpLDAPadmin delete in Live Sync: LDAP Server (OpenDJ) task token:**

```
<extension>
  <gen51:tokenxmlns:gen51="http://midpoint.evolveum.com/xml/ns/public/provisioning/liveSync-1.xsd"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="xsd:int">97</gen51:token>
</extension>
```

=====